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Simple Charge and Flash Matching to better constrain cosmic background in SBN's near and far detectors.

Monday, August 24, 2020 11:00 AM (15 minutes)

The SBN program is made up of three liquid argon time projection chambers detectors on the Booster Neutrino Beam line at Fermilab. It will probe neutrino oscillations at the ~1⊠2 scale, addressing tensions pointing to the possible existence of sterile neutrinos. SBND and ICARUS are the near and far detectors at 110 m and 600 m from the source, with a mass of 112 tons and 476 tons; respectively. Being at the surface means that one of the main background sources are cosmic rays. This talk presents a straightforward method common to both detectors to match the reconstructed charge with light read-out information in order to decrease the cosmogenic background and to better identify neutrino induced interactions.

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